

REMARKS

Claims 1 – 11 and 15 – 22 have been presented for examination. In the Office Action mailed on February 4, 2002, the Examiner rejected Claims 1 – 7, and 15 under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 9 – 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Henriksson in view of English et al. (U.S. Patent No. 5,528,593). The Applicants respectfully traverse the Examiner's rejections.

35 U.S.C. §112:

As to Claims 1 – 7, the Examiner stated that the disclosure only teaches that the base station examines the pattern of incoming power control message to determine characteristics of the fade and use the estimated fade to control changes that need to be made. Hence, one of skill in the art would not be able to make and/or use the invention as claimed.

The Examiner further states that the Specification only teaches that errors in a mobile communication come in two types; those that are random and those that are a result of a change in the propagation path. Hence, the base station determines whether the errors reported were a random nature or a genuine fading condition.

The Applicants has amended Claim 1 so that it is directed towards determining whether the errors indicate a random fade condition or a genuine fade condition. Hence, the Applicants respectfully submit that the Specification is detailed enough to allow one of skill in the art to implement the features of the instant claims.

As to Claim 15, the Examiner states that the Specification does not support the feature of adjusting transmission power in accordance with both power control commands and power control step size. The Applicants respectfully submit that there are references throughout the Specification regarding power control commands sent

from a mobile station to a base station and the base station adjusting transmission power according to the command and power control step size. As just one example, the Summary provides:

"If the mobile station determines that the received packet cannot be reliably decoded, it sets the normally '0' quality response power control bit to '1' indicating the situation to the base station. In response, the base station increases the transmission power of the signal to the mobile station. In the exemplary embodiment of the present invention, when the base station increase its transmission power it does so **with a relatively large step** in transmission power which is assumed to be more than adequate under most fading conditions. . . . In an alternative embodiment, the base station responds to a request from the mobile station for additional signal power by increasing the signal power **incrementally**. . . . In an improved embodiment, the base station examines the pattern of incoming power control message to determine characteristics of the fade. The estimation of the fading characteristics can be used to **estimate the power control changes** that need to be made." Summary of Substitute Specification, page 4, line 34 – page 5, line 20.

The Applicants respectfully submit that although the terminology "power control commands and power control step size" is not used exactly in the Specification, the meaning and intent is clear by the context of the description of the embodiments. The concept that different sizes for increasing the power is presented in the Summary above. The concept that changes to the power levels are based upon fading characteristics is also presented above. The concept that the power control commands affect the transmission energy is presented above. Hence, the concept the transmission power can be adjusted by both the power control commands and the power control step is presented above. In particular, a request for additional power (i.e., power control commands) can indicate a need for a relatively large step or incremental increases (i.e., power control step size) so that both a power control command and a power control step size are used to adjust a transmission energy. These concepts are then further developed in detail throughout the Specification. Hence, the Applicants respectfully submit that one of skill in the art would be able to make and/or use the invention as described, so that the Specification supports the features as claimed.

35 U.S.C. §103(a)

As for Claims 9 – 11, the Examiner states that English teaches a reference power level and a plurality of additional power levels $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$ related to the first power level. The Applicants do not dispute the Examiner's description of English in this manner. However, the Applicants respectfully submit that the term "reference rate power level" has a specific meaning as used in the Specification, namely, a basis upon which other power levels are decided in a "loop." The Applicants respectfully submit that English teaches one reference rate power level with three dependent rates. The instant claims teach two reference rate power levels, each with a dependent rate, and each with its own loop for setting the power level of the dependent rate. Since this is not taught by English nor Henriksson, the Applicants respectfully submit that the instant claims are patentable.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicants submit that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application is earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Dated: May 6, 2002By: 

Respectfully submitted,

Kyong H. Maccek
Reg. No. 42,977
Attorney for Applicants

QUALCOMM Incorporated
5775 Morehouse Drive
San Diego, California 92121
Telephone: (858) 651-5797
Facsimile: (858) 658-2502

APPENDIX A

1. An apparatus for dynamically controlling transmission power from a central CDMA communications station, comprising:

receiver means for receiving a signal from a remote station;

transmitter means for adjusting a transmission power to an increased transmission power level and then re-adjusting the transmission power according to error information from the received signal, wherein re-adjusting the transmission power comprises: [for the received signal to an acceptable level following a transmission power increase, wherein the acceptable level is determined by a method comprising the steps of:

determining the cause of the transmission power increase, wherein the cause of the transmission power increase is a random fade condition or a genuine fade condition;]

if the [cause of the transmission power increase] error information indicates [is] a random fade condition, then reducing the transmission power at a first predetermined rate for a first predetermined time period [in response to the transmission power increase];

if the transmission power is [still] at an unacceptable level after [the step of] reducing the transmission power at a first predetermined rate for a first predetermined time period, then continuing to reduce the transmission power at a second predetermined rate for at least one other predetermined time period following the first predetermined time period; and

if [the cause of the transmission power increase] error information indicates [is] a genuine fade condition, then maintaining the transmission power at the level of the transmission power increase.